

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. **(currently amended):** A polypeptide which comprises amino acid numbers 37 to 346 in the amino acid sequence represented by SEQ ID NO:2, or a polypeptide of a sulfotransferase which comprises an amino acid sequence having substitution, deletion, insertion, addition and/or transposition of at least one amino acid in the amino acid sequence represented by SEQ ID NO:2 and which has 90% or more homology with the amino acid sequence represented by SEQ ID NO: 2 and ~~has~~ activity of transferring a sulfate group from a sulfate group donor to a glycosaminoglycan which is a sulfate group acceptor.

2. **(original):** The polypeptide according to claim 1, which consists of the amino acid sequence represented by SEQ ID NO:2.

3. **(original):** The polypeptide according to claim 1, which consists of amino acid numbers 37 to 346 in the amino acid sequence represented by SEQ ID NO:2.

4. **(previously presented):** The polypeptide according to claim 1, wherein the glycosaminoglycan is heparin or heparan sulfate.

5. (previously presented): A sulfotransferase which comprises the polypeptide according to claim 1 and has activity of transferring a sulfate group from a sulfate group donor to a glycosaminoglycan which is a sulfate group acceptor.

6. (previously presented): A nucleic acid selected from the group consisting of (I), (II) and (III):

(I) a nucleic acid which encodes:

the polypeptide according to claim 1, or

a sulfotransferase which comprises the polypeptide according to claim 1 and has activity of transferring a sulfate group from a sulfate group donor to a glycosaminoglycan which is a sulfate group acceptor;

(II) a nucleic acid which consists of the nucleotide sequence represented by SEQ ID NO:1 and

(III) a nucleic acid which hybridizes, under stringent conditions, with:

the nucleic acid according to (I) or (II) or a nucleic acid which consists of the nucleotide sequence represented by SEQ ID NO:1 or

a nucleic acid consisting of a nucleotide sequence complementary to the nucleotide sequence of the nucleic acid according to (I) or (II) or the nucleotide sequence represented by SEQ ID NO:1.

Claim 7. **(canceled).**

Claim 8. **(canceled).**

9. (previously presented): An expression vector which comprises the nucleic acid according to claim 6.

10. (original): A recombinant which comprises the expression vector according to claim 9.

11. (original): A recombinant which comprises a host cell into which the expression vector according to claim 9 is introduced.

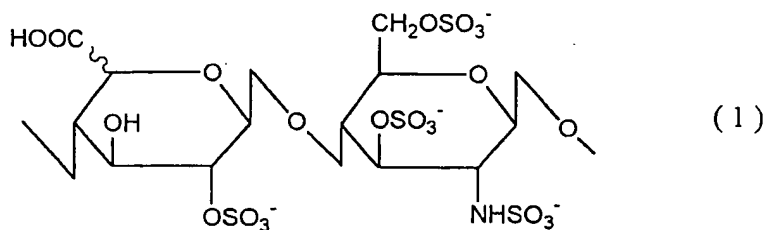
12. (previously presented): A process for producing a polypeptide or a sulfotransferase, which comprises:

growing a recombinant which comprises the expression vector according to claim 9 or a recombinant which comprises a host cell into which the expression vector according to claim 9 is introduced, and

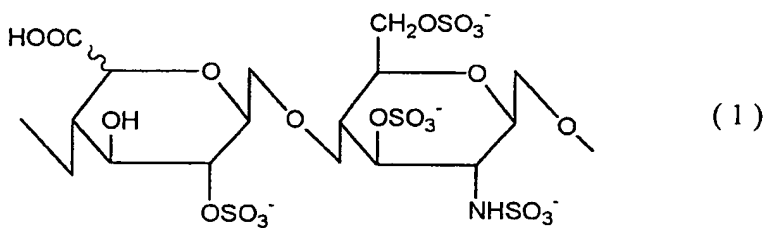
recovering the polypeptide according to claim 1 or a sulfotransferase which comprises the polypeptide according to claim 1 and has activity of transferring a sulfate group from a sulfate group donor to a glycosaminoglycan which is a sulfate group acceptor group acceptor from the obtained grown recombinant.

13. (previously presented): An enzyme agent for synthesizing a glycosaminoglycan comprising the structure represented by the following formula (1), which comprises the polypeptide according to claim 1 or a sulfotransferase which comprises the polypeptide

according to claim 1 and has activity of transferring a sulfate group from a sulfate group donor to a glycosaminoglycan which is a sulfate group acceptor:



14. (original): A process for producing a glycosaminoglycan comprising the structure represented by the following formula (1), which comprises reacting the enzyme agent according to claim 13 with heparin or heparan sulfate to transfer a sulfate group from a sulfate group donor to a sulfate group acceptor:



Claim 15. **(canceled).**